

**WINNEMUCCA NV**

Latitude = 40.90 N

WMO No. 725830

Longitude = 117.80 W

Elevation = 4315 feet

Period of Record = 1973 to 1996

Average Pressure = 25.64 inches Hg

**Design Criteria Data**

|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|--------------------------------------------------|---------------------|----------------------------------|-------------------------|------------------------|-----------------------------|
|                                                  |                     | Wet Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Dry Bulb Temperature (T)</b>                  | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 102                 | 62                               | 35                      | 9.3                    | WNW                         |
| 0.4% Occurrence                                  | 98                  | 62                               | 38                      | 10.4                   | W                           |
| 1.0% Occurrence                                  | 95                  | 60                               | 36                      | 10.7                   | W                           |
| 2.0% Occurrence                                  | 93                  | 60                               | 35                      | 10.6                   | W                           |
| Mean Daily Range                                 | 31                  | -                                | -                       | -                      | -                           |
| 97.5% Occurrence                                 | 14                  | 13                               | 10                      | 5.7                    | S                           |
| 99.0% Occurrence                                 | 8                   | 7                                | 8                       | 5.4                    | S                           |
| 99.6% Occurrence                                 | 2                   | 1                                | 6                       | 4.9                    | S                           |
| Median of Extreme Lows                           | -5                  | -5                               | 4                       | 4.6                    | S                           |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Wet Bulb Temperature (T<sub>wb</sub>)</b>     | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 66                  | 92                               | 67                      | 9.3                    | W                           |
| 0.4% Occurrence                                  | 64                  | 90                               | 59                      | 9.4                    | W                           |
| 1.0% Occurrence                                  | 62                  | 89                               | 52                      | 9.6                    | W                           |
| 2.0% Occurrence                                  | 61                  | 88                               | 49                      | 9.8                    | W                           |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Vapor Pressure (in. Hg) | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Humidity Ratio (HR)</b>                       | <b>(gr/lb)</b>      |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 97                  | 68                               | 0.56                    | 8.0                    | S                           |
| 0.4% Occurrence                                  | 78                  | 68                               | 0.45                    | 7.8                    | S                           |
| 1.0% Occurrence                                  | 68                  | 67                               | 0.39                    | 8.3                    | S                           |
| 2.0% Occurrence                                  | 60                  | 67                               | 0.35                    | 8.3                    | S                           |
| <b>Air Conditioning/<br/>Humid Area Criteria</b> | <b># of Hours</b>   | T ≥ 93°F                         | T ≥ 80°F                | T <sub>wb</sub> ≥ 73°F | T <sub>wb</sub> ≥ 67°F      |
|                                                  |                     | 188                              | 944                     | 0                      | 5                           |

**Other Site Data**

| Weather Region                                   | Rain Rate<br>100 Year Recurrence<br>(in./hr) | Basic Wind Speed<br>3 sec gust @ 33 ft<br>50 Year Recurrence (mph) | Ventilation Cooling Load Index<br>(Ton-hr/cfm/yr) Base 75°F-RH 60%<br>Latent + Sensible |
|--------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 6                                                | 1.0                                          | 90                                                                 | 0.0 + 1.0                                                                               |
| Ground Water Temperature (°F)<br>50 Foot Depth * | Frost Depth<br>50 Year Recurrence<br>(in.)   | Ground Snow Load<br>50 Year Recurrence<br>(lb/ft <sup>2</sup> )    | Average Annual<br>Freeze-Thaw Cycles<br>(#)                                             |
| 52.9                                             | N/A                                          | 7                                                                  | 137                                                                                     |

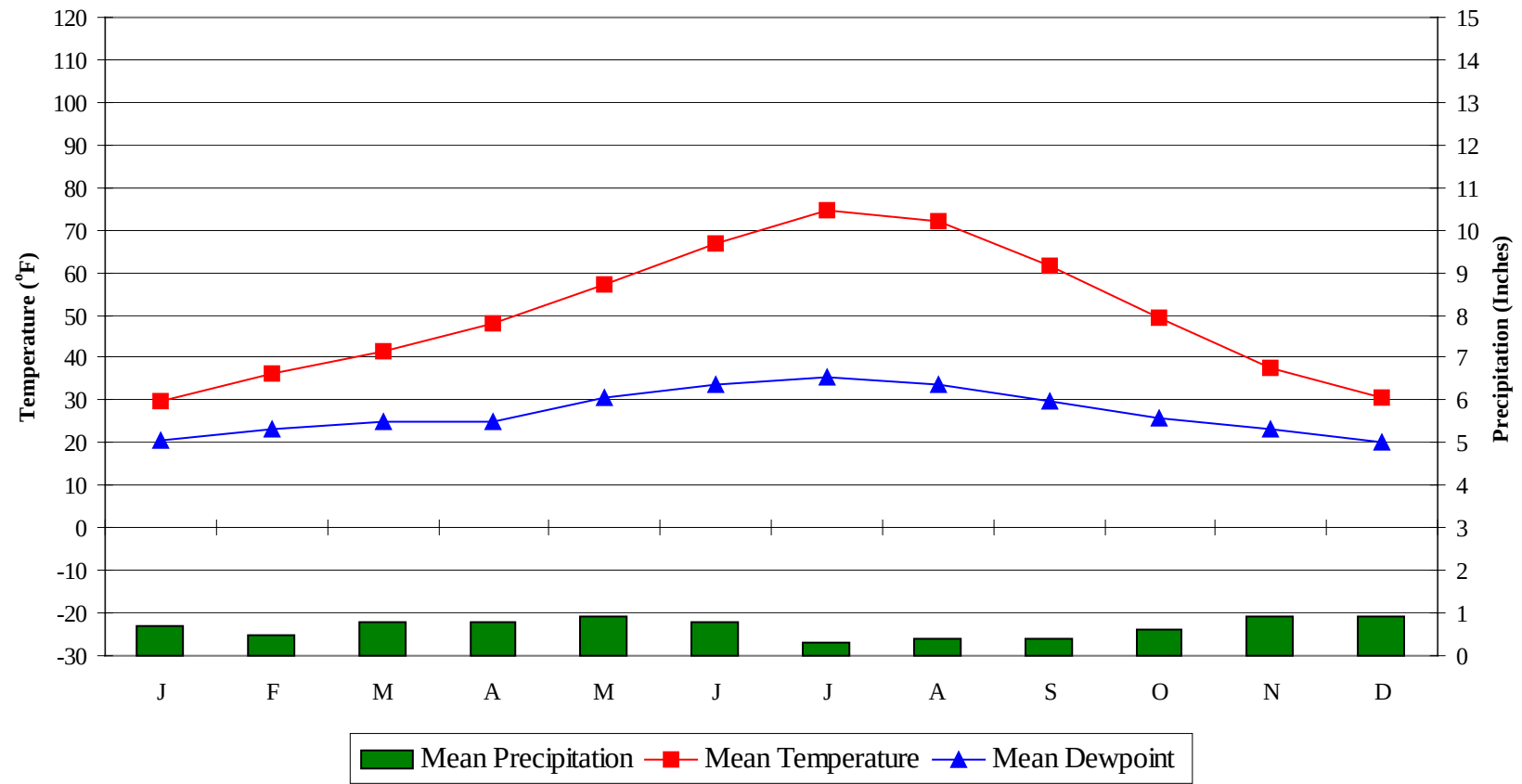
\*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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NV

WMO No. 725830

### Average Annual Climate

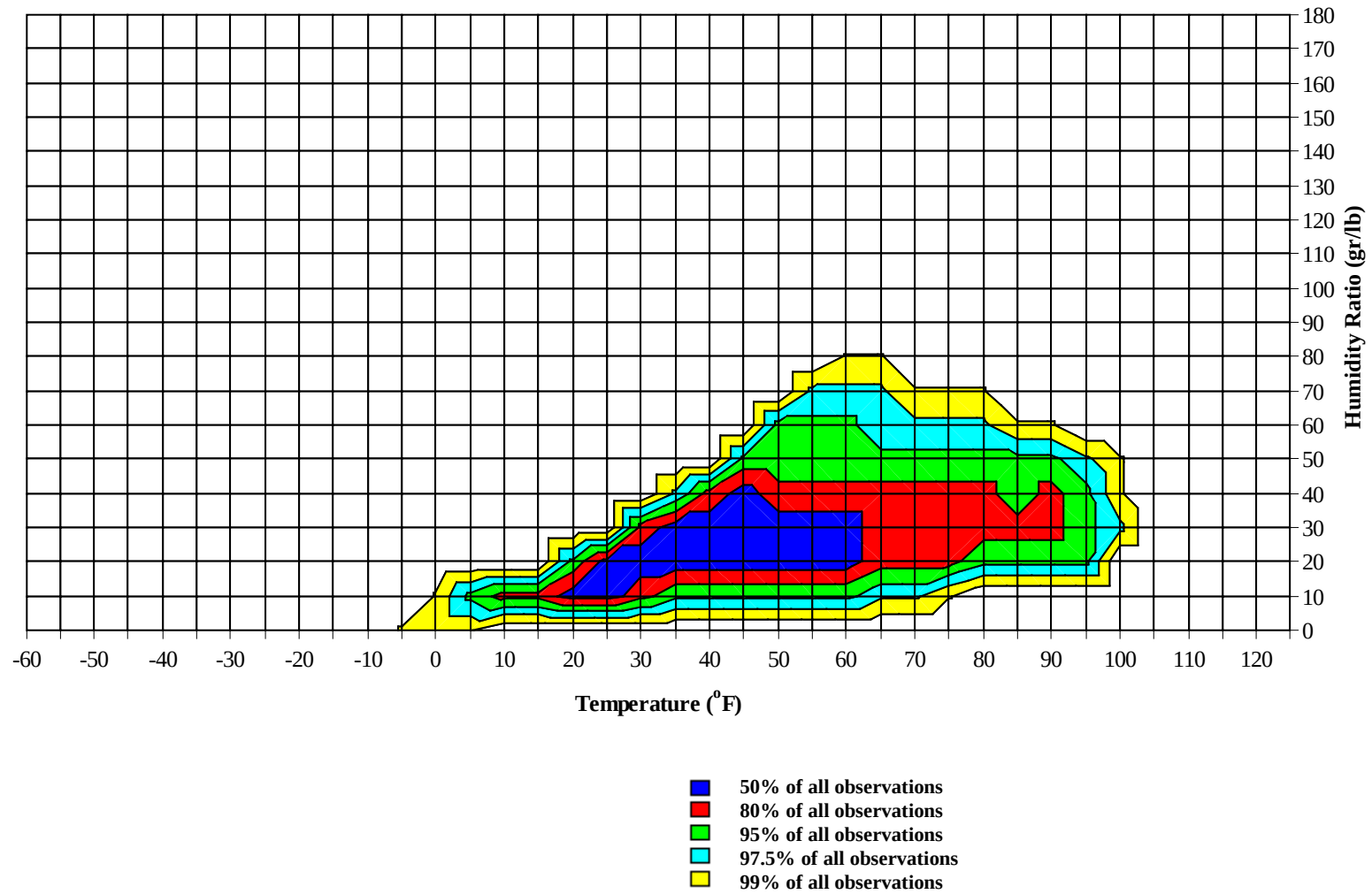


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### Long Term Psychrometric Summary

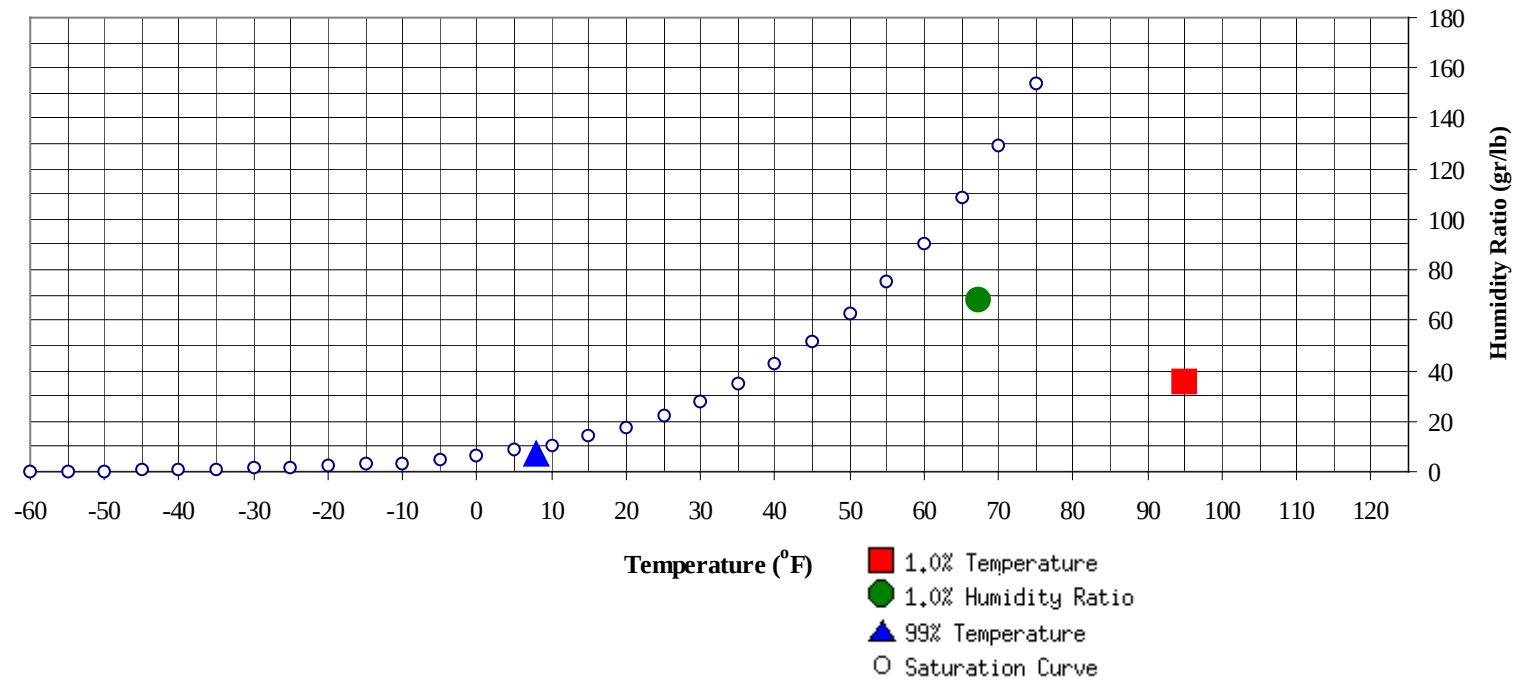


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## Psychrometric Summary of Peak Design Values



|              | (°F) | MCHR    | Enthalpy | 1.0% Humidity | (gr/lb) | MCDB | MCWB | MC Dewpt | Enthalpy |
|--------------|------|---------|----------|---------------|---------|------|------|----------|----------|
|              |      | (gr/lb) | (btu/lb) |               |         | (°F) | (°F) | (°F)     | (btu/lb) |
| 99% Dry Bulb | 8    | 7.4     | 3.0      | Ratio         | 67.9    | 67.4 | 57.6 | 52       | 26.8     |

| 1.0% Dry Bulb | (°F) | MCHR    | MCWB | Enthalpy |
|---------------|------|---------|------|----------|
|               |      | (gr/lb) | (°F) | (btu/lb) |
|               | 95   | 35.7    | 60.4 | 28.4     |

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WMO No. 725830

**Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)****Period of Record = 1973 to 1996**

| Temperature<br>Range<br>(°F) | January             |                |                |              |                          | February            |                |                |              |                          | March               |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 75 / 79                      |                     |                |                |              |                          |                     |                |                |              |                          |                     | 1              | 0              | 1            | 51.8                     |
| 70 / 74                      |                     |                |                |              |                          |                     | 1              | 0              | 1            | 50.9                     |                     | 4              | 1              | 6            | 48.5                     |
| 65 / 69                      |                     | 0              |                | 0            | 44.0                     |                     | 4              | 0              | 4            | 47.8                     |                     | 12             | 4              | 15           | 47.3                     |
| 60 / 64                      |                     | 1              |                | 1            | 46.3                     |                     | 10             | 2              | 12           | 45.2                     |                     | 23             | 6              | 29           | 44.7                     |
| 55 / 59                      |                     | 5              | 0              | 5            | 43.8                     | 0                   | 20             | 5              | 25           | 43.4                     | 1                   | 36             | 12             | 49           | 42.9                     |
| 50 / 54                      | 1                   | 17             | 5              | 23           | 41.3                     | 2                   | 32             | 13             | 47           | 41.2                     | 5                   | 48             | 26             | 79           | 40.9                     |
| 45 / 49                      | 4                   | 27             | 9              | 40           | 38.9                     | 8                   | 38             | 25             | 71           | 38.6                     | 17                  | 46             | 39             | 103          | 38.4                     |
| 40 / 44                      | 13                  | 40             | 25             | 78           | 35.8                     | 20                  | 40             | 41             | 101          | 35.8                     | 34                  | 39             | 46             | 119          | 35.8                     |
| 35 / 39                      | 22                  | 47             | 43             | 112          | 32.5                     | 33                  | 34             | 46             | 113          | 32.3                     | 48                  | 25             | 47             | 121          | 32.4                     |
| 30 / 34                      | 38                  | 47             | 56             | 141          | 29.0                     | 50                  | 26             | 42             | 119          | 28.8                     | 56                  | 12             | 40             | 108          | 28.9                     |
| 25 / 29                      | 43                  | 32             | 42             | 116          | 24.7                     | 46                  | 10             | 28             | 84           | 24.6                     | 45                  | 2              | 19             | 66           | 24.9                     |
| 20 / 24                      | 39                  | 18             | 30             | 87           | 20.3                     | 31                  | 5              | 12             | 47           | 20.3                     | 28                  | 0              | 6              | 34           | 20.3                     |
| 15 / 19                      | 31                  | 8              | 17             | 57           | 15.9                     | 16                  | 2              | 5              | 23           | 15.7                     | 11                  |                | 1              | 12           | 15.6                     |
| 10 / 14                      | 25                  | 3              | 12             | 40           | 11.1                     | 9                   | 2              | 2              | 13           | 10.8                     | 4                   |                | 0              | 4            | 11.1                     |
| 5 / 9                        | 15                  | 2              | 6              | 22           | 6.5                      | 5                   | 1              | 1              | 7            | 6.2                      | 0                   |                | 0              | 0            | 6.4                      |
| 0 / 4                        | 11                  | 1              | 3              | 15           | 1.6                      | 3                   | 0              | 1              | 4            | 1.5                      | 0                   |                | 0              | 0            | 2.5                      |
| -5 / -1                      | 4                   | 0              | 0              | 4            | -2.8                     | 0                   | 0              | 0              | 0            | -3.1                     |                     |                | 0              | 0            |                          |
| -10 / -6                     | 4                   | 0              | 0              | 4            | -6.8                     | 1                   | 0              | 0              | 1            | -7.1                     |                     |                |                |              |                          |
| -15 / -11                    | 0                   |                | 0              | 0            | -12.6                    | 0                   | 0              | 0              | 0            | -12.7                    |                     |                |                |              |                          |
| -20 / -16                    | 0                   |                |                | 0            | -16.8                    | 1                   |                | 0              | 1            | -16.8                    |                     |                |                |              |                          |
| -25 / -21                    |                     |                |                |              |                          | 0                   |                |                | 0            | -21.8                    |                     |                |                |              |                          |
| -30 / -26                    |                     |                |                |              |                          | 0                   |                |                | 0            | -27.0                    |                     |                |                |              |                          |
| -35 / -31                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -40 / -36                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

**Caution:** This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

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NV

WMO No. 725830

**Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)****Period of Record = 1973 to 1996**

| Temperature<br>Range<br>(°F) | April               |                |                |              |                          | May                 |                |                |              |                          | June                |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          |                     | 2              | 0              | 2            | 62.5                     |
| 95 / 99                      |                     |                |                |              |                          |                     | 0              |                | 0            | 63.3                     |                     | 10             | 4              | 13           | 61.1                     |
| 90 / 94                      |                     |                |                |              |                          |                     | 4              | 1              | 5            | 59.5                     |                     | 25             | 11             | 35           | 59.0                     |
| 85 / 89                      |                     | 1              | 0              | 1            | 55.3                     | 0                   | 13             | 2              | 15           | 56.6                     | 0                   | 36             | 15             | 51           | 57.2                     |
| 80 / 84                      |                     | 6              | 1              | 7            | 52.5                     | 0                   | 23             | 10             | 33           | 54.8                     | 2                   | 42             | 20             | 64           | 55.2                     |
| 75 / 79                      |                     | 13             | 4              | 17           | 50.6                     | 1                   | 31             | 12             | 44           | 52.7                     | 6                   | 38             | 26             | 70           | 53.5                     |
| 70 / 74                      |                     | 21             | 7              | 28           | 48.9                     | 2                   | 35             | 19             | 56           | 50.5                     | 13                  | 29             | 33             | 76           | 51.8                     |
| 65 / 69                      | 0                   | 30             | 12             | 41           | 46.9                     | 8                   | 38             | 25             | 70           | 48.6                     | 21                  | 22             | 33             | 76           | 50.0                     |
| 60 / 64                      | 3                   | 34             | 18             | 55           | 45.0                     | 15                  | 35             | 33             | 84           | 46.8                     | 33                  | 17             | 33             | 83           | 48.0                     |
| 55 / 59                      | 7                   | 36             | 25             | 67           | 42.8                     | 26                  | 27             | 36             | 88           | 45.0                     | 43                  | 11             | 27             | 81           | 46.4                     |
| 50 / 54                      | 17                  | 36             | 35             | 88           | 40.7                     | 39                  | 22             | 39             | 100          | 42.7                     | 45                  | 5              | 21             | 72           | 43.9                     |
| 45 / 49                      | 33                  | 34             | 41             | 108          | 38.3                     | 48                  | 14             | 36             | 98           | 39.8                     | 39                  | 3              | 12             | 53           | 40.5                     |
| 40 / 44                      | 43                  | 20             | 36             | 99           | 35.4                     | 48                  | 5              | 21             | 75           | 36.7                     | 24                  | 1              | 5              | 30           | 37.0                     |
| 35 / 39                      | 50                  | 7              | 33             | 90           | 32.1                     | 36                  | 1              | 10             | 47           | 33.0                     | 10                  | 0              | 1              | 11           | 33.2                     |
| 30 / 34                      | 45                  | 2              | 22             | 69           | 28.3                     | 19                  | 0              | 4              | 23           | 28.7                     | 3                   | 0              | 0              | 3            | 29.3                     |
| 25 / 29                      | 26                  | 0              | 6              | 32           | 24.1                     | 6                   |                | 0              | 6            | 24.7                     | 1                   | 0              |                | 1            | 24.5                     |
| 20 / 24                      | 13                  |                | 1              | 14           | 19.9                     | 1                   |                |                | 1            | 19.8                     |                     |                |                |              |                          |
| 15 / 19                      | 4                   |                | 0              | 4            | 16.1                     | 0                   |                |                | 0            | 15.0                     |                     |                |                |              |                          |
| 10 / 14                      | 0                   |                |                | 0            | 11.4                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -10 / -6                     |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -15 / -11                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -20 / -16                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -25 / -21                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -30 / -26                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -35 / -31                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -40 / -36                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

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WINNEMUCCA

NV

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**Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)****Period of Record = 1973 to 1996**

| Temperature<br>Range<br>(°F) | July                |                |                |              |                          | August              |                |                |              |                          | September           |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          | 0                   |                |                | 0            | 62.0                     |                     |                |                |              |                          |
| 100 / 104                    |                     | 6              | 1              | 8            | 61.9                     | 4                   | 0              |                | 4            | 63.4                     |                     |                |                |              |                          |
| 95 / 99                      |                     | 36             | 13             | 49           | 61.2                     | 0                   | 23             | 7              | 30           | 60.8                     |                     | 3              | 0              | 3            | 59.4                     |
| 90 / 94                      |                     | 57             | 27             | 84           | 59.6                     | 0                   | 51             | 19             | 70           | 58.8                     |                     | 16             | 2              | 19           | 58.1                     |
| 85 / 89                      | 0                   | 56             | 27             | 83           | 57.9                     | 0                   | 56             | 24             | 80           | 57.3                     |                     | 34             | 9              | 44           | 56.3                     |
| 80 / 84                      | 7                   | 44             | 28             | 79           | 56.4                     | 3                   | 47             | 26             | 76           | 55.9                     |                     | 42             | 14             | 56           | 54.5                     |
| 75 / 79                      | 16                  | 25             | 33             | 75           | 55.0                     | 10                  | 30             | 28             | 68           | 54.4                     | 0                   | 41             | 16             | 57           | 52.8                     |
| 70 / 74                      | 30                  | 13             | 36             | 79           | 53.2                     | 21                  | 19             | 39             | 79           | 52.6                     | 3                   | 33             | 22             | 59           | 50.9                     |
| 65 / 69                      | 40                  | 6              | 34             | 81           | 51.3                     | 29                  | 10             | 38             | 76           | 51.1                     | 10                  | 27             | 28             | 65           | 49.0                     |
| 60 / 64                      | 47                  | 3              | 27             | 77           | 49.1                     | 41                  | 4              | 33             | 79           | 49.0                     | 18                  | 21             | 35             | 74           | 47.6                     |
| 55 / 59                      | 44                  | 1              | 13             | 58           | 45.8                     | 47                  | 2              | 21             | 70           | 45.9                     | 28                  | 13             | 36             | 77           | 45.2                     |
| 50 / 54                      | 35                  | 0              | 6              | 41           | 42.1                     | 45                  | 1              | 9              | 55           | 42.3                     | 41                  | 7              | 30             | 79           | 42.2                     |
| 45 / 49                      | 20                  | 0              | 1              | 21           | 38.4                     | 32                  | 0              | 4              | 35           | 38.0                     | 47                  | 3              | 23             | 73           | 38.9                     |
| 40 / 44                      | 7                   |                | 1              | 8            | 35.1                     | 15                  |                | 1              | 16           | 34.2                     | 44                  | 1              | 14             | 59           | 35.1                     |
| 35 / 39                      | 2                   |                |                | 2            | 32.7                     | 5                   |                | 0              | 5            | 31.3                     | 30                  | 0              | 6              | 36           | 31.5                     |
| 30 / 34                      | 0                   |                |                | 0            | 29.8                     | 1                   |                |                | 1            | 27.2                     | 13                  |                | 2              | 16           | 27.2                     |
| 25 / 29                      | 0                   |                |                | 0            |                          |                     |                |                |              |                          | 5                   |                | 0              | 5            | 23.8                     |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          | 1                   |                |                | 1            | 18.9                     |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | 16.0                     |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -10 / -6                     |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -15 / -11                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -20 / -16                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -25 / -21                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -30 / -26                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -35 / -31                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -40 / -36                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

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NV

WMO No. 725830

**Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)****Period of Record = 1973 to 1996**

| Temperature<br>Range<br>(°F) | October             |                |                |              |                          | November            |                |                |              |                          | December            |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 90 / 94                      |                     | 0              |                | 0            | 58.1                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     | 5              | 0              | 5            | 55.5                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     | 15             | 2              | 17           | 53.6                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 75 / 79                      | 0                   | 20             | 3              | 24           | 51.7                     |                     | 0              |                | 0            | 51.0                     |                     |                |                |              |                          |
| 70 / 74                      | 0                   | 34             | 6              | 40           | 49.5                     | 0                   | 3              |                | 3            | 49.3                     |                     |                |                |              |                          |
| 65 / 69                      | 0                   | 39             | 11             | 50           | 47.6                     | 0                   | 10             | 0              | 10           | 47.9                     |                     | 0              |                | 0            | 49.0                     |
| 60 / 64                      | 2                   | 34             | 19             | 56           | 45.7                     | 0                   | 20             | 1              | 21           | 45.6                     |                     | 2              |                | 2            | 45.4                     |
| 55 / 59                      | 10                  | 31             | 25             | 65           | 43.8                     | 2                   | 24             | 8              | 34           | 43.6                     | 0                   | 8              | 1              | 9            | 43.4                     |
| 50 / 54                      | 16                  | 31             | 35             | 81           | 41.4                     | 6                   | 32             | 18             | 56           | 41.3                     | 3                   | 19             | 7              | 29           | 41.5                     |
| 45 / 49                      | 28                  | 20             | 43             | 92           | 38.9                     | 14                  | 39             | 26             | 79           | 38.7                     | 8                   | 34             | 14             | 55           | 38.6                     |
| 40 / 44                      | 40                  | 12             | 42             | 94           | 35.8                     | 21                  | 41             | 37             | 99           | 35.6                     | 12                  | 44             | 21             | 76           | 35.6                     |
| 35 / 39                      | 51                  | 6              | 32             | 90           | 31.9                     | 32                  | 35             | 45             | 111          | 32.3                     | 28                  | 51             | 40             | 119          | 32.6                     |
| 30 / 34                      | 47                  | 1              | 20             | 69           | 27.9                     | 40                  | 23             | 47             | 109          | 28.5                     | 35                  | 43             | 49             | 127          | 28.9                     |
| 25 / 29                      | 33                  | 0              | 7              | 40           | 23.9                     | 44                  | 8              | 30             | 82           | 24.4                     | 37                  | 23             | 45             | 105          | 24.5                     |
| 20 / 24                      | 16                  |                | 1              | 17           | 19.4                     | 39                  | 4              | 17             | 60           | 20.4                     | 35                  | 15             | 33             | 83           | 20.2                     |
| 15 / 19                      | 5                   |                | 0              | 5            | 15.8                     | 23                  | 1              | 8              | 32           | 15.8                     | 31                  | 5              | 21             | 57           | 15.7                     |
| 10 / 14                      | 1                   |                | 0              | 1            | 10.9                     | 11                  | 0              | 2              | 13           | 11.0                     | 30                  | 3              | 10             | 43           | 11.0                     |
| 5 / 9                        | 0                   |                |                | 0            | 6.2                      | 6                   |                | 1              | 7            | 6.4                      | 17                  | 1              | 3              | 21           | 6.3                      |
| 0 / 4                        |                     |                |                |              |                          | 3                   |                | 0              | 3            | 1.4                      | 9                   | 1              | 2              | 12           | 1.4                      |
| -5 / -1                      |                     |                |                |              |                          | 1                   |                |                | 1            | -2.9                     | 2                   | 0              | 1              | 3            | -2.6                     |
| -10 / -6                     |                     |                |                |              |                          | 0                   |                |                | 0            | -6.7                     | 1                   | 0              | 0              | 1            | -7.4                     |
| -15 / -11                    |                     |                |                |              |                          |                     |                |                |              |                          | 1                   | 0              | 0              | 1            | -11.1                    |
| -20 / -16                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              | 0              | 0            | -16.3                    |
| -25 / -21                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | -22.8                    |
| -30 / -26                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | -25.8                    |
| -35 / -31                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | -32.5                    |
| -40 / -36                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            |                          |

**Caution:** This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

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**Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**

**Period of Record = 1973 to 1996**

| Annual Totals                |                     |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|
| Temperature<br>Range<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     | 0              |                | 0            | 62.0                     |
| 100 / 104                    |                     | 12             | 2              | 14           | 62.4                     |
| 95 / 99                      | 0                   | 71             | 22             | 94           | 61.0                     |
| 90 / 94                      | 0                   | 154            | 58             | 212          | 59.1                     |
| 85 / 89                      | 1                   | 200            | 77             | 278          | 57.2                     |
| 80 / 84                      | 11                  | 218            | 98             | 327          | 55.3                     |
| 75 / 79                      | 33                  | 199            | 120            | 352          | 53.5                     |
| 70 / 74                      | 69                  | 192            | 162            | 423          | 51.4                     |
| 65 / 69                      | 107                 | 196            | 183            | 486          | 49.3                     |
| 60 / 64                      | 158                 | 204            | 206            | 568          | 47.2                     |
| 55 / 59                      | 206                 | 212            | 207            | 625          | 44.7                     |
| 50 / 54                      | 254                 | 250            | 243            | 748          | 41.8                     |
| 45 / 49                      | 296                 | 260            | 273            | 829          | 38.8                     |
| 40 / 44                      | 319                 | 243            | 292            | 854          | 35.8                     |
| 35 / 39                      | 348                 | 207            | 306            | 861          | 32.3                     |
| 30 / 34                      | 348                 | 153            | 285            | 785          | 28.7                     |
| 25 / 29                      | 284                 | 76             | 180            | 540          | 24.5                     |
| 20 / 24                      | 202                 | 42             | 102            | 345          | 20.2                     |
| 15 / 19                      | 121                 | 16             | 54             | 191          | 15.8                     |
| 10 / 14                      | 80                  | 8              | 27             | 115          | 11.0                     |
| 5 / 9                        | 41                  | 4              | 12             | 57           | 6.4                      |
| 0 / 4                        | 25                  | 2              | 7              | 34           | 1.5                      |
| -5 / -1                      | 8                   | 1              | 1              | 10           | -2.7                     |
| -10 / -6                     | 7                   | 0              | 1              | 8            | -6.9                     |
| -15 / -11                    | 2                   | 0              | 0              | 2            | -11.9                    |
| -20 / -16                    | 1                   | 0              | 0              | 1            | -16.6                    |
| -25 / -21                    | 1                   | 0              |                | 1            | -22.4                    |
| -30 / -26                    | 0                   |                |                | 0            | -26.0                    |
| -35 / -31                    | 0                   |                |                | 0            | -32.5                    |
| -40 / -36                    | 0                   |                |                | 0            |                          |

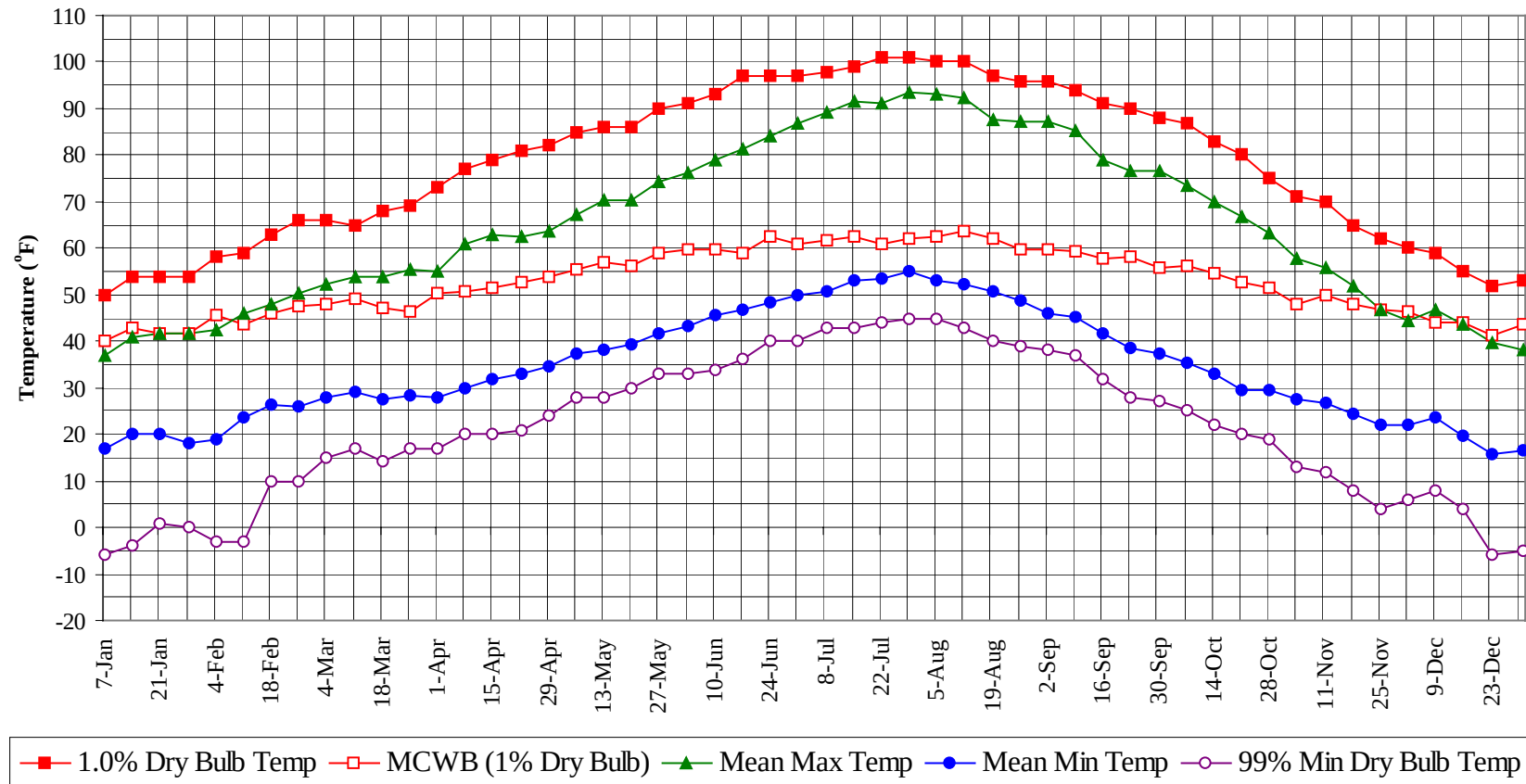
**Caution:** This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

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### Annual Summary of Temperatures

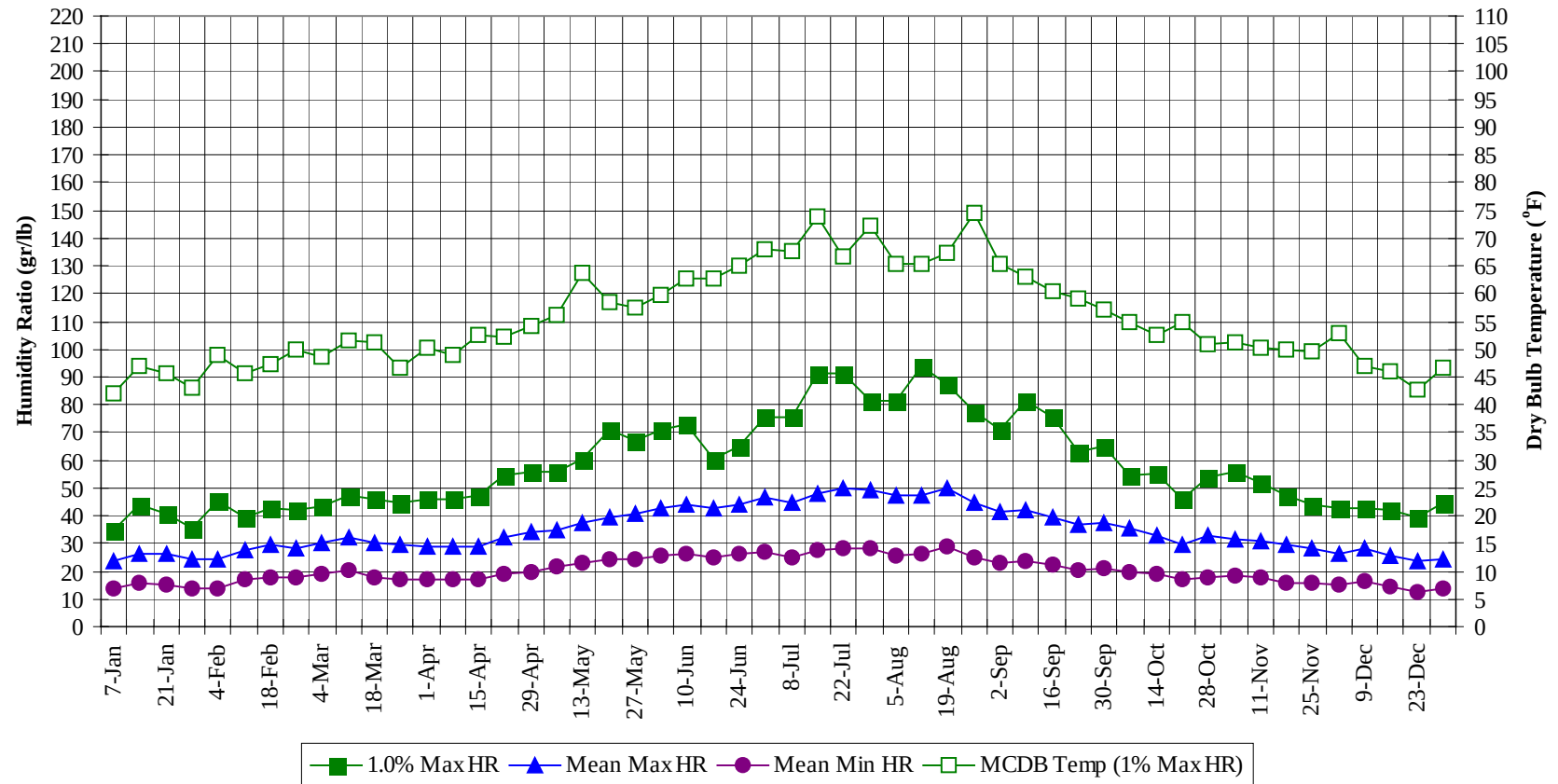


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## Long Term Humidity and Dry Bulb Temperature Summary



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**Long Term Dry Bulb Temperature and Humidity Summary**

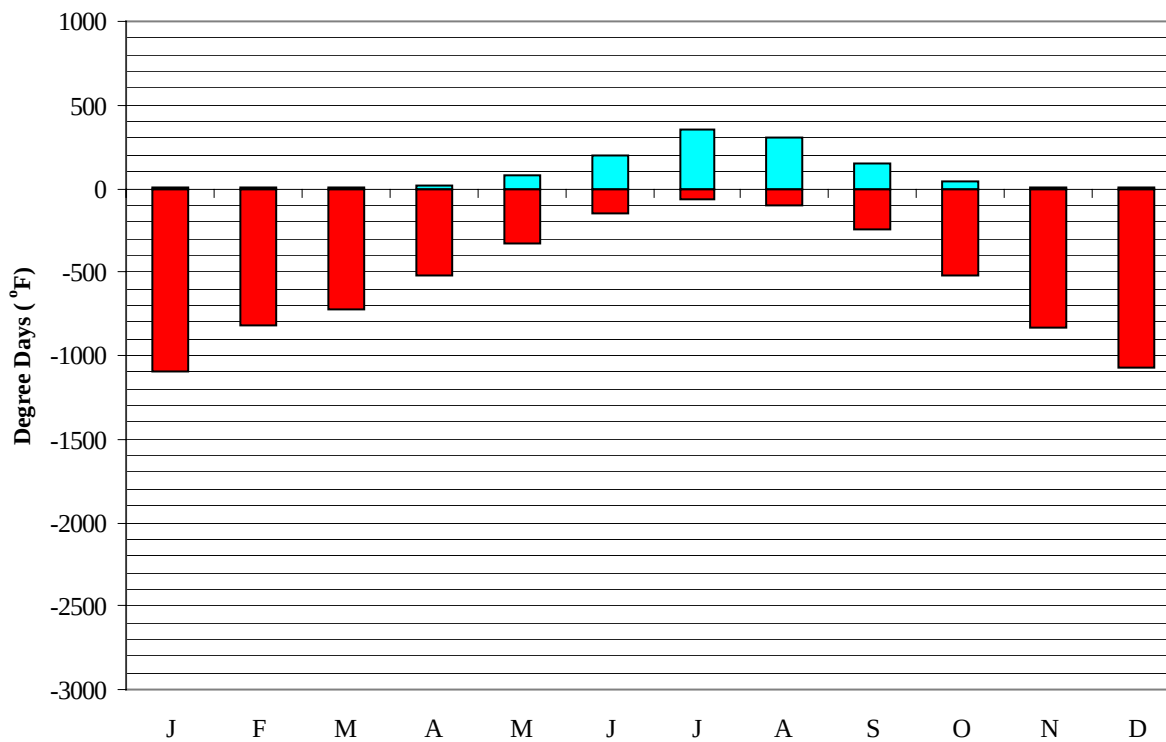
| Week<br>Ending | 1.0%<br>Temp (°F) | MCWB @<br>1% Temp (°F) | Mean Max<br>Temp (°F) | Mean Min<br>Temp (°F) | 99%<br>Temp (°F) | 1.0%<br>HR (gr/lb) | MCDB @<br>1% HR (°F) | Mean Max<br>HR (gr/lb) | Mean Min<br>HR (gr/lb) |
|----------------|-------------------|------------------------|-----------------------|-----------------------|------------------|--------------------|----------------------|------------------------|------------------------|
| 7-Jan          | 50.0              | 40.2                   | 36.8                  | 17.1                  | -6.0             | 35.0               | 42.2                 | 23.4                   | 13.6                   |
| 14-Jan         | 54.0              | 42.9                   | 41.1                  | 20.1                  | -4.0             | 44.1               | 46.8                 | 26.4                   | 16.1                   |
| 21-Jan         | 54.0              | 41.7                   | 41.8                  | 20.2                  | 1.0              | 40.6               | 45.6                 | 26.2                   | 15.3                   |
| 28-Jan         | 54.0              | 41.6                   | 41.8                  | 18.3                  | 0.0              | 35.7               | 43.1                 | 24.6                   | 13.5                   |
| 4-Feb          | 58.0              | 45.5                   | 42.6                  | 18.8                  | -3.0             | 45.5               | 49.0                 | 24.2                   | 13.6                   |
| 11-Feb         | 59.0              | 43.6                   | 45.9                  | 23.5                  | -3.0             | 39.2               | 45.5                 | 27.5                   | 17.2                   |
| 18-Feb         | 63.0              | 46.1                   | 48.1                  | 26.4                  | 10.0             | 42.7               | 47.3                 | 29.8                   | 17.7                   |
| 25-Feb         | 66.0              | 47.6                   | 50.2                  | 25.9                  | 10.0             | 42.0               | 50.0                 | 28.5                   | 17.6                   |
| 4-Mar          | 66.0              | 48.0                   | 52.3                  | 28.1                  | 15.0             | 43.4               | 48.6                 | 30.4                   | 19.4                   |
| 11-Mar         | 65.0              | 49.1                   | 53.9                  | 29.1                  | 17.0             | 47.6               | 51.5                 | 32.2                   | 20.1                   |
| 18-Mar         | 68.0              | 47.2                   | 53.7                  | 27.7                  | 14.0             | 46.2               | 51.1                 | 30.1                   | 17.8                   |
| 25-Mar         | 69.0              | 46.5                   | 55.5                  | 28.4                  | 17.0             | 44.8               | 46.8                 | 29.6                   | 17.0                   |
| 1-Apr          | 73.0              | 50.1                   | 55.2                  | 28.0                  | 17.0             | 46.2               | 50.2                 | 29.2                   | 17.3                   |
| 8-Apr          | 77.0              | 50.8                   | 60.7                  | 29.9                  | 20.0             | 46.2               | 48.8                 | 29.1                   | 17.2                   |
| 15-Apr         | 79.0              | 51.3                   | 62.8                  | 31.7                  | 20.0             | 47.6               | 52.7                 | 29.2                   | 17.1                   |
| 22-Apr         | 81.0              | 52.7                   | 62.6                  | 32.8                  | 21.0             | 54.6               | 52.3                 | 32.1                   | 18.9                   |
| 29-Apr         | 82.0              | 53.7                   | 63.7                  | 34.4                  | 24.0             | 56.0               | 54.3                 | 34.3                   | 19.6                   |
| 6-May          | 85.0              | 55.2                   | 67.0                  | 37.4                  | 28.0             | 56.0               | 56.1                 | 35.1                   | 21.4                   |
| 13-May         | 86.0              | 56.8                   | 70.2                  | 38.3                  | 28.0             | 60.2               | 63.8                 | 37.2                   | 22.7                   |
| 20-May         | 86.0              | 56.3                   | 70.4                  | 39.5                  | 30.0             | 70.7               | 58.4                 | 39.2                   | 24.4                   |
| 27-May         | 90.0              | 58.8                   | 74.4                  | 41.6                  | 33.0             | 67.2               | 57.5                 | 40.7                   | 24.6                   |
| 3-Jun          | 91.0              | 59.8                   | 76.2                  | 43.4                  | 33.0             | 70.7               | 59.8                 | 42.7                   | 25.5                   |
| 10-Jun         | 93.0              | 59.8                   | 79.0                  | 45.6                  | 34.0             | 72.8               | 62.7                 | 43.9                   | 26.3                   |
| 17-Jun         | 97.0              | 58.9                   | 81.4                  | 46.6                  | 36.0             | 60.2               | 62.8                 | 42.4                   | 25.3                   |
| 24-Jun         | 97.0              | 62.6                   | 84.3                  | 48.3                  | 40.0             | 65.1               | 65.0                 | 44.1                   | 26.0                   |
| 1-Jul          | 97.0              | 61.0                   | 86.7                  | 49.9                  | 40.0             | 75.6               | 67.9                 | 46.8                   | 27.2                   |
| 8-Jul          | 98.0              | 61.7                   | 89.1                  | 50.9                  | 43.0             | 75.6               | 67.6                 | 44.7                   | 25.1                   |
| 15-Jul         | 99.0              | 62.3                   | 91.4                  | 53.0                  | 43.0             | 91.0               | 73.8                 | 48.1                   | 27.4                   |
| 22-Jul         | 101.0             | 61.0                   | 91.3                  | 53.3                  | 44.0             | 91.0               | 66.8                 | 50.0                   | 28.5                   |
| 29-Jul         | 101.0             | 62.2                   | 93.6                  | 55.0                  | 45.0             | 81.2               | 72.3                 | 49.0                   | 28.3                   |
| 5-Aug          | 100.0             | 62.5                   | 93.0                  | 53.2                  | 45.0             | 81.2               | 65.2                 | 47.1                   | 25.9                   |
| 12-Aug         | 100.0             | 63.8                   | 92.1                  | 52.4                  | 43.0             | 93.8               | 65.5                 | 47.3                   | 26.0                   |
| 19-Aug         | 97.0              | 62.0                   | 87.7                  | 50.9                  | 40.0             | 87.5               | 67.3                 | 50.1                   | 28.9                   |
| 26-Aug         | 96.0              | 59.7                   | 87.2                  | 48.7                  | 39.0             | 77.7               | 74.4                 | 44.8                   | 24.7                   |
| 2-Sep          | 96.0              | 59.6                   | 87.0                  | 45.8                  | 38.0             | 70.7               | 65.5                 | 41.3                   | 23.0                   |
| 9-Sep          | 94.0              | 59.3                   | 85.4                  | 45.4                  | 37.0             | 81.2               | 63.0                 | 42.0                   | 23.9                   |
| 16-Sep         | 91.0              | 57.6                   | 79.1                  | 41.7                  | 32.0             | 75.6               | 60.3                 | 39.3                   | 22.5                   |
| 23-Sep         | 90.0              | 58.2                   | 76.8                  | 38.5                  | 28.0             | 63.0               | 59.2                 | 37.0                   | 20.6                   |
| 30-Sep         | 88.0              | 56.0                   | 76.7                  | 37.5                  | 27.0             | 65.1               | 57.1                 | 37.7                   | 21.2                   |
| 7-Oct          | 87.0              | 56.4                   | 73.4                  | 35.4                  | 25.0             | 54.6               | 54.7                 | 35.4                   | 20.0                   |
| 14-Oct         | 83.0              | 54.5                   | 70.0                  | 33.0                  | 22.0             | 55.3               | 52.5                 | 32.8                   | 19.1                   |
| 21-Oct         | 80.0              | 52.7                   | 66.7                  | 29.7                  | 20.0             | 46.2               | 54.8                 | 29.5                   | 16.9                   |
| 28-Oct         | 75.0              | 51.4                   | 63.2                  | 29.4                  | 19.0             | 53.9               | 51.0                 | 32.8                   | 17.9                   |
| 4-Nov          | 71.0              | 47.8                   | 57.7                  | 27.6                  | 13.0             | 56.0               | 51.3                 | 31.4                   | 18.1                   |
| 11-Nov         | 70.0              | 50.1                   | 55.8                  | 26.6                  | 12.0             | 51.8               | 50.4                 | 30.9                   | 17.5                   |
| 18-Nov         | 65.0              | 47.9                   | 51.8                  | 24.5                  | 8.0              | 47.6               | 50.0                 | 29.5                   | 16.1                   |
| 25-Nov         | 62.0              | 46.7                   | 47.0                  | 21.9                  | 4.0              | 44.1               | 49.6                 | 28.0                   | 15.5                   |
| 2-Dec          | 60.0              | 46.2                   | 44.4                  | 22.1                  | 6.0              | 42.7               | 52.9                 | 26.0                   | 14.9                   |
| 9-Dec          | 59.0              | 44.2                   | 46.9                  | 23.6                  | 8.0              | 42.7               | 47.0                 | 28.1                   | 16.6                   |
| 16-Dec         | 55.0              | 43.9                   | 43.5                  | 19.7                  | 4.0              | 42.0               | 46.0                 | 25.4                   | 14.1                   |
| 23-Dec         | 52.0              | 41.3                   | 39.9                  | 15.9                  | -6.0             | 39.2               | 42.8                 | 23.7                   | 12.5                   |
| 31-Dec         | 53.0              | 43.6                   | 38.3                  | 16.7                  | -5.0             | 44.8               | 46.8                 | 24.3                   | 13.6                   |

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WMO No. 725830

**Degree Days, Heating and Cooling**  
(Base 65°F)



■ Mean Cooling Degree Days 
 ■ Mean Heating Degree Days

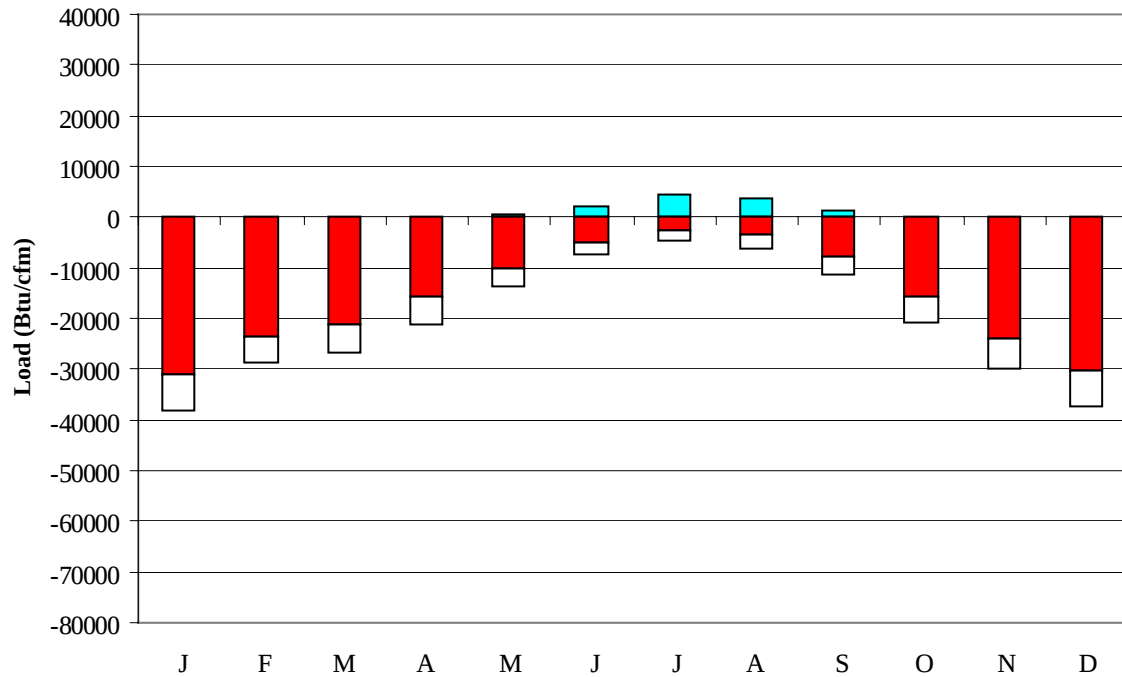
|     | Mean Cooling<br>Degree Days (°F) | Mean Heating<br>Degree Days (°F) |
|-----|----------------------------------|----------------------------------|
| JAN | 0                                | 1101                             |
| FEB | 0                                | 818                              |
| MAR | 2                                | 729                              |
| APR | 23                               | 524                              |
| MAY | 78                               | 327                              |
| JUN | 200                              | 151                              |
| JUL | 359                              | 68                               |
| AUG | 304                              | 98                               |
| SEP | 144                              | 242                              |
| OCT | 41                               | 521                              |
| NOV | 1                                | 829                              |
| DEC | 0                                | 1071                             |
| ANN | 1153                             | 6479                             |

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**Average Ventilation and Infiltration Loads**  
**(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)**

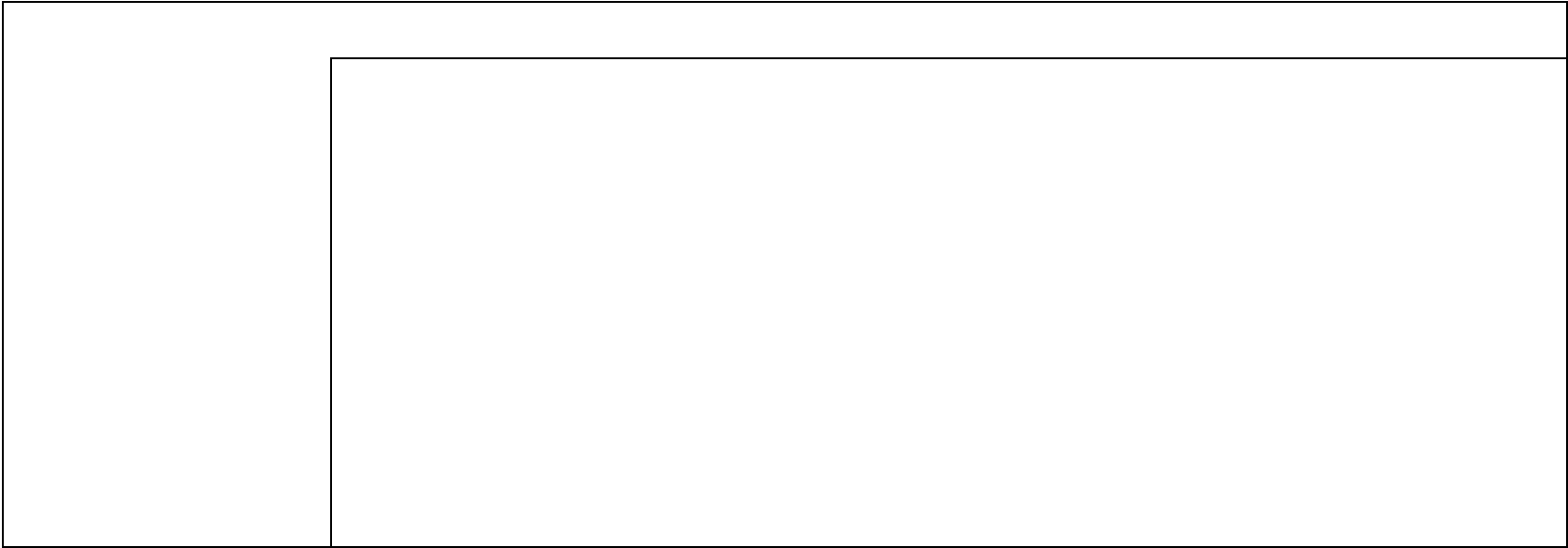


|                                                                            |                                                                                |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <span style="color: cyan;">■</span> Average Sensible Cooling Load          | <span style="color: red;">■</span> Average Sensible Heating Load               |
| <span style="color: yellow;">■</span> Average Latent Cooling (Drying) Load | <span style="color: white;">■</span> Average Latent Heating (Humidifying) Load |

|     | Average Sensible<br>Cooling Load<br>(Btu/cfm) | Average Sensible<br>Heating Load<br>(Btu/cfm) | Average Latent<br>Cooling Load<br>(Btu/cfm) | Average Latent<br>Heating Load<br>(Btu/cfm) |
|-----|-----------------------------------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------|
| JAN | 0                                             | -30961                                        | 0                                           | -7086                                       |
| FEB | 0                                             | -23396                                        | 0                                           | -5453                                       |
| MAR | 0                                             | -21277                                        | 0                                           | -5442                                       |
| APR | 82                                            | -15682                                        | 0                                           | -5332                                       |
| MAY | 542                                           | -10295                                        | 0                                           | -3442                                       |
| JUN | 2015                                          | -5122                                         | 3                                           | -2338                                       |
| JUL | 4339                                          | -2483                                         | 14                                          | -2114                                       |
| AUG | 3542                                          | -3434                                         | 9                                           | -2726                                       |
| SEP | 1370                                          | -7744                                         | 1                                           | -3735                                       |
| OCT | 217                                           | -15560                                        | 0                                           | -5251                                       |
| NOV | 0                                             | -23785                                        | 0                                           | -5985                                       |
| DEC | 0                                             | -30182                                        | 0                                           | -7132                                       |
| ANN | 12107                                         | -189921                                       | 27                                          | -56036                                      |

**Average Annual Solar Radiation – Nearest Available Site**  
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation  
Data Available



**Average Annual Solar Heat and Illumination – Nearest Available Site**

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

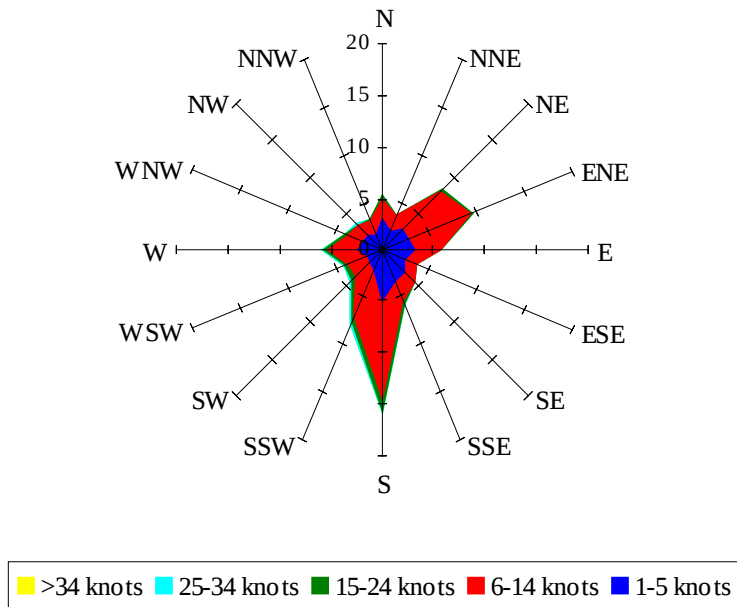
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### Wind Summary - December, January, and February

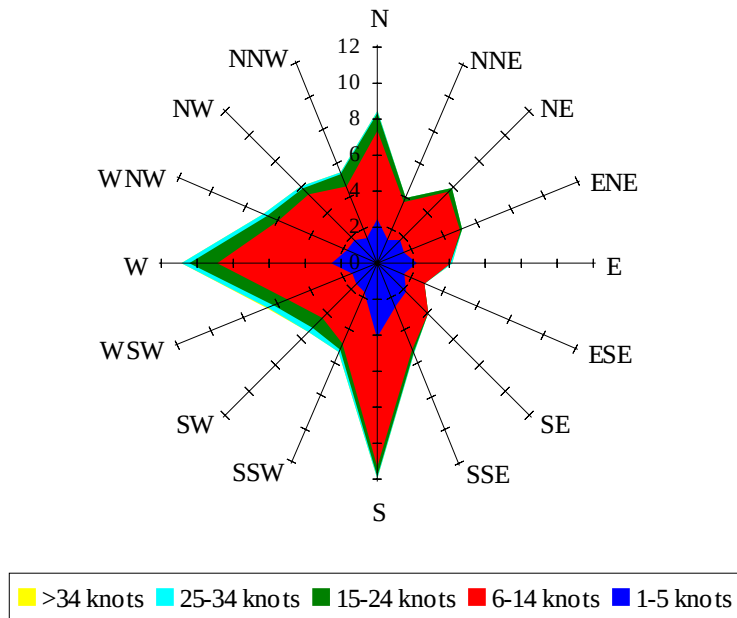
Labels of Percent Frequency on North Axis



Percent Calm = 6.02

### Wind Summary - March, April, and May

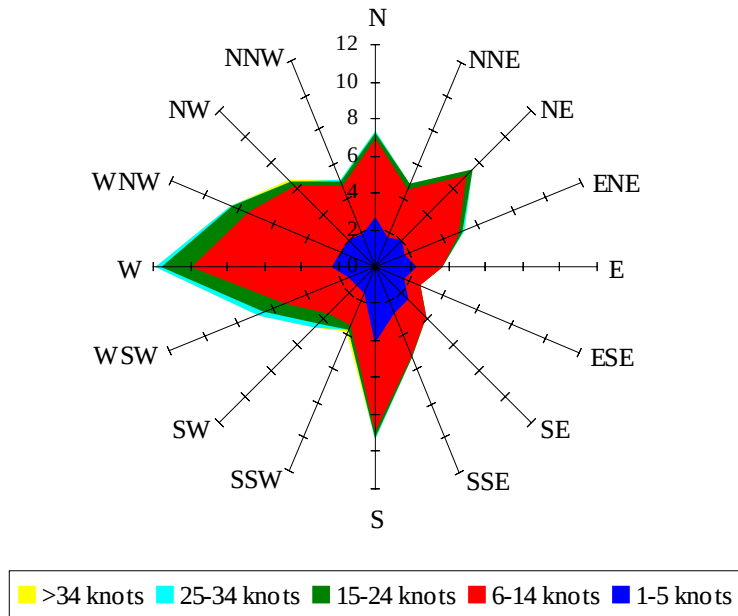
Labels of Percent Frequency on North Axis



Percent Calm = 3.64

### Wind Summary - June, July, and August

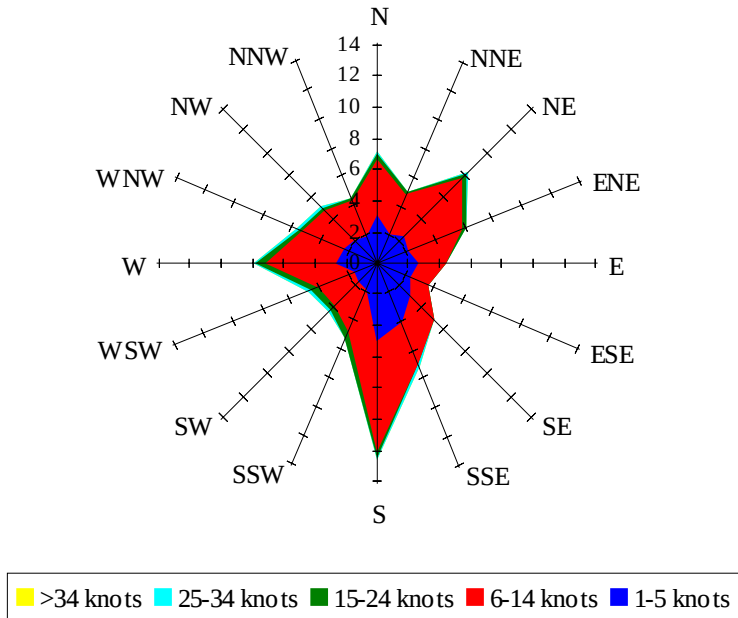
Labels of Percent Frequency on North Axis



Percent Calm = 4.20

### Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 5.56